



CITY OF SNOHOMISH

116 UNION AVENUE · SNOHOMISH, WASHINGTON 98290 · (360) 568-3115 · WWW.SNOHOMISHWA.GOV

STATE ENVIRONMENTAL POLICY ACT (SEPA) CHECKLIST

PURPOSE OF CHECKLIST

The State Environmental Policy Act (SEPA), Chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

INSTRUCTIONS FOR APPLICANTS [\[help\]](#)

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

USE OF CHECKLIST FOR NONPROJECT PROPOSALS [\[help\]](#)

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements - that do not contribute meaningfully to the analysis of the proposal.

Project #:	SEPA 19-0003	
Date:	9/16/19	Staff Intake: KWS



A. BACKGROUND [\[help\]](#)

1. Name of proposed project, if applicable:

Gagnon Welding Soil Cleanup

2. Name of applicant:

Ryan Gagnon

3. Address and phone number of applicant and contact person:

1411 First Street, Snohomish, WA 98290
(360) 862-8319
Ryan Gagnon

4. Date checklist prepared:

9/10/19

5. Agency requesting checklist:

City of Snohomish

6. Proposed timing or schedule (including phasing, if applicable):

ASAP following SEPA and Land Use Application approval. Excavation activities are assumed to take one to two weeks, with three active excavation days.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Soil samples were collected during two sampling events in April and May 2019 to evaluate the site soil conditions. Metal impacted soil was identified, with elevated lead, arsenic, and cadmium. See attached Phase II Soil Investigation report and Gagnon Welding Soil Cleanup proposal by Stratum Group. A final cleanup report will be completed to document the cleanup activities.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No

10. List any government approvals or permits that will be needed for your proposal, if known.

None

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COMMENTS ONLY**



Phase II Soil Sampling Investigation by Stratum Group, dated 6/14/19



Grading permit exemption issued by City Engineer pursuant to SMC 14.237.030E.



11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Shallow soils will be excavated from the southern portion of the exterior of the Gagnon Welding property between the building and the dike. Sampling indicates that metal-impacted soil is present over approximately 2,200 square feet of the property at depths ranging from 0.5 feet to a maximum of 3 feet. Impacted soils were typically associated with zones that appeared discolored or contained metal debris. We estimate approximately 180 cubic yards of impacted soil will be removed. Soil will be disposed of off-site as non-hazardous solid waste. Confirmation samples will be collected during the cleanup to document residual soil quality. The excavation will be backfilled with clean fill material. The proposed excavation areas are shown in the attached report titled "Phase II Soil Sampling Investigation, 1411 First Street" (Stratum Group, 2019). Sampling and documentation will be completed by Stratum Group. Excavation work will be completed by Loth Industries.

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Soil samples indicate elevated presence of arsenic, cadmium, and lead in top 3 feet of soils in an area measuring approximately 2,200 square feet south and east of the building. Project is to remove contaminated soils and replace with clean material

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

- SE 1/4 of Section 13, Township 28N, Range 5E
- 1411 First Street, Snohomish, WA
- Southern portion of Snohomish County Parcel 00444100200100, focused on the area between the building and the berm along the river
- See attached Phase II and Soil Cleanup Proposal reports by Stratum Group for site vicinity, topographic, and site plan maps.



B. ENVIRONMENTAL ELEMENTS

1. Earth [\[help\]](#)

a. General description of the site (circle one):

Flat, rolling, hilly, steep slopes, mountainous, other _____

Generally flat with a berm along the southern edge of the property that slopes steeply down to the Snohomish River. The berm will be left in place.



b. What is the steepest slope on the site (approximate percent slope)?

The vast majority of the property lies on an approximately 4.8% slope. The berm that slopes down to the river, which will not be excavated, reaches a maximum of an approximately 43% slope.



c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Previously excavated test pits on the property suggests approximately 2-3 feet of a mixture of fill and overbank deposits (silt, silty sand, metal, glass, and brick debris) underlain by native silty sand and sandy silt.





d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Estimated removal of 180 cubic yards of soil. Import approximately 180 cubic yards of gravel. Backfilled area will be partially regraded to improve surface water drainage. Affected area will cover approximately 2,200 square feet.

Exported materials to be transported to a landfill

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

No change.



h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Protect temporary stockpiled soils beneath plastic sheeting. Employ silt fencing or straw wattles to control silt runoff, as needed. Utilize best management practice as dictated by conditions.

2. Air [\[help\]](#)

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Minor engine emissions from excavator and dump truck.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.



c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None.

3. Water [\[help\]](#)

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The Snohomish River lies adjacent to the property to the south. The river is separated from the project area by a dike.





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Work exempt from
Shoreline Substantial
Development permit
pursuant to WAC
173-27-040(2)(b)

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes. Excavation may occur up to approximately 30 feet north of the edge of the river, but the berm/dike will remain in place. No soil or surface water runoff from the excavation area will be allowed to reach the river. See attached "Phase II Soil Sampling Investigation, 1411 First Street" for map of proposed excavation area.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.



- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes. The entire property is located within the 100-year floodplain. See attached flood map.

Project will balance cut and fill

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.



b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No.



- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None.





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c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm water will infiltrate.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

No.

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

Excavators plan to alter surface drainage to try and direct surface runoff away from the building so it can infiltrate on other portions of the property. Storm water will not be directed toward the Snohomish River.

- d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

None planned. However, excavation can create berms or ditches to capture stormwater if needed. Silt fencing and/or straw wattles may also be implemented on an as-needed basis.

Overall drainage patterns will be unchanged. Project will modify the grade in the immediate vicinity of the building to slope away from the building.

4. **Plants** [\[help\]](#)

- a. Check the types of vegetation found on the site:

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- grass
- pasture
- crop or grain
- Orchards, vineyards or other permanent crops.
- wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

- b. What kind and amount of vegetation will be removed or altered?

Excavation area is limited to gravel area south of the building. Minor grass disturbance near the berm may occur.

- c. List threatened and endangered species known to be on or near the site.

None.

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None.





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- e. List all noxious weeds and invasive species known to be on or near the site.
None.

5. Animals [\[help\]](#)

- a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

birds: hawk, heron, eagle, songbirds, other:
 mammals: deer, bear, elk, beaver, other:
 fish: bass, salmon, trout, herring, shellfish, other _____

Birds likely utilize the deciduous trees on the property. Fish likely inhabit the Snohomish River in the vicinity of the property. Mammal activity is unlikely due to the industrial development and use of the property, except for rodents.

- b. List any threatened and endangered species known to be on or near the site.

According to the U.S Fish and Wildlife Service's IPaC site, the following threatened/endangered species may be present on or near the property: Gray Wolf, North American Wolverine, Marbled Murrelet, Streaked Horned Lark, Yellow-billed Cuckoo, Oregon Spotted Frog, Bull Trout.

- c. Is the site part of a migration route? If so, explain.

Not specifically, but four species of migratory birds may travel near the subject property: Bald Eagle, Great Blue Heron, Olive-sided Flycatcher, Rufous Hummingbird.

- d. Proposed measures to preserve or enhance wildlife, if any:

None. Disturbance will be limited to gravel portions of the property.

- e. List any invasive animal species known to be on or near the site.

None known.

6. Energy and natural resources [\[help\]](#)

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Diesel fuel will be used to power the excavator and dump truck during short term excavation work. No long term energy uses for project.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

The Snohomish River supports anadromous salmonid populations. The work will be separated from the river by appx 30 feet, as well as the steep river bank and a dike.

The Riverview Wildlife Refuge is appx 1,500 feet to the west. This site is not known to contain nesting locations





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- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None.



7. Environmental health [\[help\]](#)

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Project is being completed to remove metal impacted soil. Safety precautions will be completed for onsite workers. Project will result in an overall reduction of risk to human health by removal and off-site disposal of impacted soil.

- 1) Describe any known or possible contamination at the site from present or past uses.

Shallow soil exceeds MTCA Method A cleanup standards for arsenic, cadmium, and lead.

- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None.

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

None.

- 4) Describe special emergency services that might be required.

None. 911 would be called in the event of an emergency.

- 5) Proposed measures to reduce or control environmental health hazards, if any:

Workers will avoid direct contact with contaminated soil and utilize appropriate PPE to do so.



- b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.



Contamination on site limited to proposed work area - appx 2,200 square foot area according to test pit information in Phase II Soil Sampling Investigation report



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- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Short term noise (~3 days spread across ~2 weeks) from excavation equipment and dump truck traffic and excavation work.



- 3) Proposed measures to reduce or control noise impacts, if any:

None. Noise unlikely to greatly exceed noise produced by current site use as a metal fabrication shop and work will be completed during typical work hours.

Construction noise regulated/limited by Ch. 8.16 SMC

8. Land and shoreline use [\[help\]](#)

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The site is currently utilized as a metal welding and fabrication shop. Adjacent properties are either undeveloped or residential. No.



- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No.

- 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No.

- c. Describe any structures on the site.

One large two-story warehouse-industrial building covers the central and northern portions of the property.



- d. Will any structures be demolished? If so, what?

No.

- e. What is the current zoning classification of the site?

Commercial.





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f. What is the current comprehensive plan designation of the site?

Commercial.



g. If applicable, what is the current shoreline master program designation of the site?

Minimum jurisdictional limits, urban conservancy



h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

The slope along the southern edge of the property leading down to the Snohomish River is listed as a steep (>33%) slope and as an area susceptible to basal undercutting by Snohomish County.

i. Approximately how many people would reside or work in the completed project?

None. The project area is a gravel area used for storage and is planned to remain so.

No additional employees as a direct result of the proposal

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

N/A

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

None.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

None.

9. Housing [\[help\]](#)

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.



- c. Proposed measures to reduce or control housing impacts, if any:

N/A

10. Aesthetics [\[help\]](#)

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

None proposed.

- b. What views in the immediate vicinity would be altered or obstructed?

None.



- c. Proposed measures to reduce or control aesthetic impacts, if any:

N/A

11. Light and glare [\[help\]](#)

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None. Work will be completed during daylight hours.



- b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

- c. What existing off-site sources of light or glare may affect your proposal?

None.

- d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation [\[help\]](#)

- a. What designated and informal recreational opportunities are in the immediate vicinity?

Various recreation on the adjacent Snohomish River.





b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None.

13. Historic and cultural preservation [\[help\]](#)

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.

The property lies on the edge of the registered Snohomish Historic District. Portions of the existing building on the property date back to 1930.



b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

No.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

Soil will be observed during excavation but the site has been used for industrial/commercial use since the late 1800s and excavation will be limited to a maximum of 3 feet deep. Activities will not impact the buildings on the property or adjacent properties.

Historic site research done by Stratum Group as part of investigation background

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

If cultural/historic resources are encountered, work will stop and the necessary agencies will be notified.

Inadvertent discovery plan required by Ch. 14.252 SMC

14. Transportation [\[help\]](#)

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

Dump trucks and equipment will access the property from First Street near the intersection with Avenue E.





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- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

None in immediate vicinity of property. Project will not impact public transit access.

Nearest bus stop located at Second Street/Avenue E

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

None. None.

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No.



- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

Project site is in flight path of Harvey Airfield, located south of the Snohomish River

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

6 vehicular trips per day; 4 dump trucks trips. Peak volume would be during daylight/work hours. Dump truck activity will occur periodically over two weeks.



- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

- h. Proposed measures to reduce or control transportation impacts, if any:

None. Impacted expected to be minimal.

15. Public services [\[help\]](#)

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

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- b. Proposed measures to reduce or control direct impacts on public services, if any.
None.

16. Utilities [help]

- a. Circle utilities currently available at the site:

electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,
other _____



- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.
None.

C. Signature [help]

The information and answers provided in this Environmental Checklist (including Supplement for Non-project Actions, if applicable) are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Kim Ninnemann *Kim Ninnemann*
Date Submitted: 9/11/19 *on behalf of Regenbogen*

Agency Evaluation completed by: Brooke Eiden Date: 9/23/19
Signature: Umen

**ENVIRONMENTAL SITE ASSESSMENT:
PHASE II SOIL SAMPLING INVESTIGATION**

**1411 FIRST STREET
SNOHOMISH COUNTY PARCEL 00444100200100
SNOHOMISH, WASHINGTON 98290**



For:

Ryan Gagnon
1411 First Street
Snohomish, Washington 98290

By:



PO Box 2546
Bellingham, WA 98227
(360) 714-9409

June 14, 2019

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APPENDIX II

Laboratory Report with Chain-of-Custody

April 19, 2019 sample event

May 16, 2019 sample event

APPENDIX III

Sanborn Fire Insurance Maps

Aerial Photographs

Stratum Group

PO Box 2546, Bellingham, Washington 98227
Phone: (360) 714-9409

June 14, 2019

Ryan Gagnon
1411 First Street
Snohomish, Washington 98290

Re: Phase II Soil Sampling Investigation
1411 First Street
Snohomish County Parcel 00444100200100
Snohomish, Washington 98290

Dear Mr. Gagnon:

We herein present the results of our soil sampling investigation for the property at 1411 First Avenue in Snohomish, Washington. The purpose of the investigation was to evaluate whether the property has been impacted by its historical uses as an iron works, foundry and shingle mill.

To evaluate the site for potential contaminants, a total of twelve test pits were excavated around the site. Sample results indicate that soils in the southern and eastern portion of the site contain concentrations of arsenic, cadmium, and/or lead above the Model Toxic Control Act (MTCA) Method A cleanup standards for unrestricted land use. No carcinogenic PAH or PCB contamination was identified. The metal impacted soil was encountered at a maximum depth of 3 feet below ground surface (bgs); however, some areas were only impacted to 0.5-2.5 feet bgs.

Based upon this initial testing, the shallow soil is considered to be contaminated with arsenic, cadmium and lead and therefore additional evaluation and/or cleanup is warranted on the site.

Should you have any questions concerning this Environmental Site Assessment, please do not hesitate to contact us at (360) 714-9409.

Sincerely,
Stratum Group

Kim Ninnemann

Kim Ninnemann, B.Sc., L.G.
Licensed Geologist



KIM N NINNEMANN

Ben Carlson

Ben Carlson, M.Sc.
Geologist-in-Training

1.0 EXECUTIVE SUMMARY

A phase II environmental investigation was completed at 1411 First Street in Snohomish, Washington to evaluate if the site had been negatively impacted by the site's historical uses as an ironworks, foundry and shingle mill.

The site is industrially zoned and has been developed since the late 1890s. Our historical review indicates that the site operated as the Snohomish Ironworks from the late 1890s through the mid 2010s. The ironworks business included a foundry for smelting iron for iron and steel products, such as manhole covers and train parts. Additionally, a shingle mill was located on the western portion of the site in the early 1900s. The site is currently developed with one large warehouse building that is utilized by Gagnon Welding and 42 Metal Design.

Based upon the foundry operations, a test pit investigation was conducted to evaluate the site for potential metals, carcinogenic polyaromatic hydrocarbon (cPAH), cyanide and/or PCB contamination. Six test pits were excavated on the site on April 19, 2019 and six additional test pits were excavated on May 16, 2019. The soil pits indicated that fill soil generally extended to approximately 2.5 to 3.5 feet and was underlain by moist tan-brown silt.

Twenty-four soil samples were collected during the test pit excavations. No contamination was encountered along the west and southwest exterior of the building or in the soil collected through the floor of the building. No cPAHs or PCBs were detected above cleanup standards. Elevated arsenic, cadmium and lead concentrations were encountered in the test pits to the southeast and east sides of the building that exceed the Model Toxic Control Act (MTCA) Method A cleanup standards for unrestricted land use, which were used as a screening level. The range of elevated arsenic concentrations was 22 to 1,900 mg/kg, which exceed the Method A cleanup standards of 20 mg/kg. The range of elevated cadmium concentrations was 2.1 to 15 mg/kg, which exceed the Method A cleanup standards of 2 mg/kg. The range of elevated lead concentrations was 350 to 1,200 mg/kg, which exceed the Method A cleanup standard of 250 mg/kg. The impacted soil extends up to 3 feet below ground surface (bgs). The source of the metal impacts is suspected to be associated with onsite disposal of coal ash and/or waste sand generated from the historical foundry work.

Based upon the concentrations of arsenic, cadmium and lead in the shallow soil, the site is considered to be contaminated and therefore additional sampling and/or cleanup is warranted on the site.

2.0 GENERAL PROJECT INFORMATION

This phase II investigation was conducted prior to a potential commercial loan for the site. Based upon the initial research for a phase I site assessment, the risk of potential contamination was deemed elevated due to the long-term use of the site as an ironworks and foundry. The project's goals were to evaluate the site's subsurface conditions to determine if contamination is present.

Site Information

1411 First Street
Snohomish County Parcel 00444100200100
Snohomish, Washington 98290

Contact information about the project operations including property owner and environmental consultant are provided below:

Property Owner

5 R Properties LLC
1618 Meadow Place
Snohomish, Washington 98290-1860
Contact: Ryan Gagnon
360-862-8319
ryan@gagnonwelding42.com

Environmental Consultant

Stratum Group
PO Box 2546
Bellingham, WA 98227
Contact: Kim Ninnemann
360-714-9409
kim@stratumgroup.net

3.0 SITE DESCRIPTION

3.1 Site Location

The site is located southwest of the intersection of First Street and E Street, approximately two blocks west of the historic commercial downtown of Snohomish. The property currently utilizes the address of 1411 First Street in Snohomish, Snohomish County, Washington; however historically the site has been identified at 96 or 98 Avenue E or 1401 Lebanon. The site is located along the north side of the Snohomish River.

The location of the site is presented on the topographic map in Figure 1.

Figure 1. Site Vicinity Map

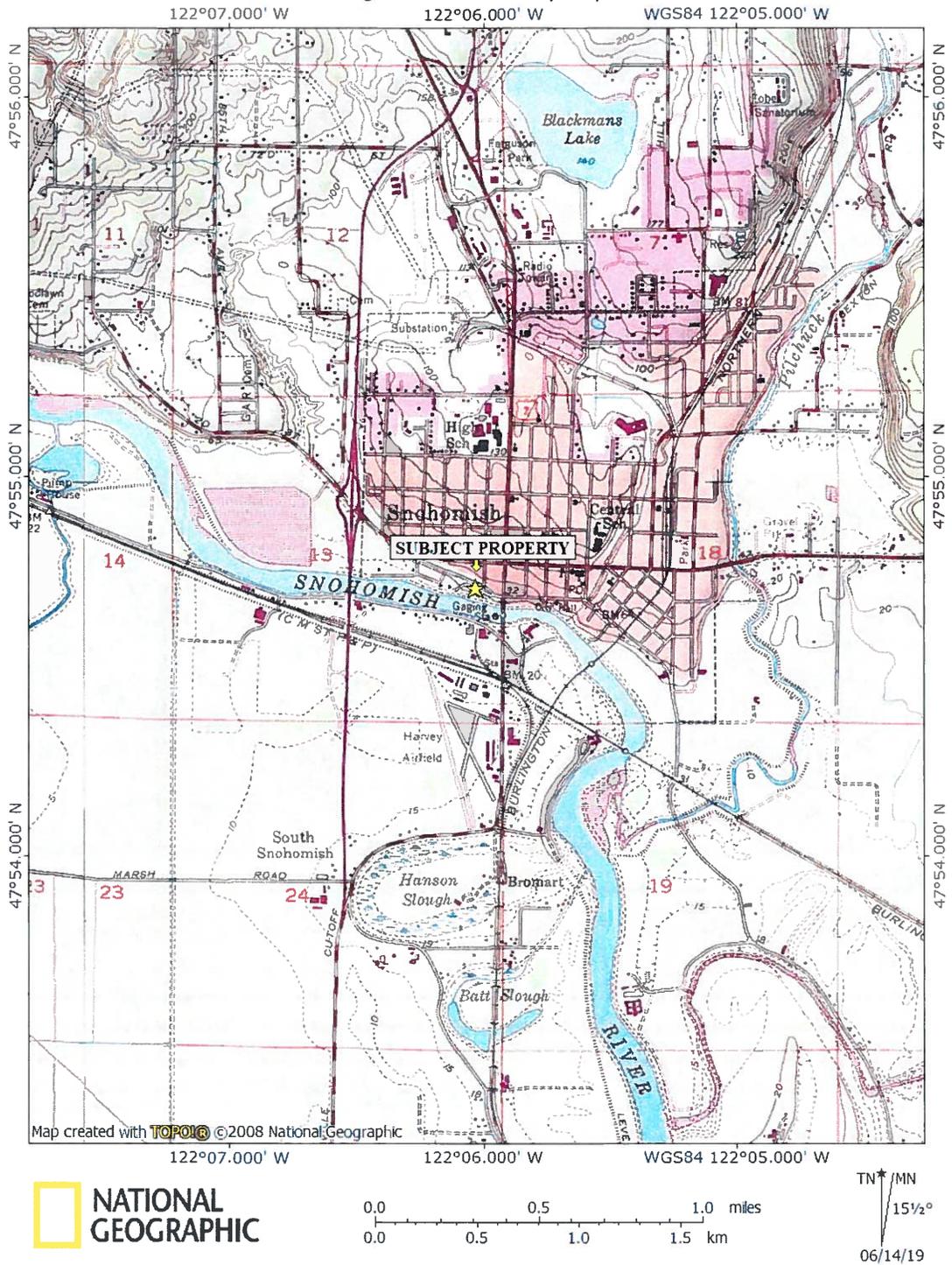


Figure 1. Site vicinity map

3.2 Site and Vicinity General Characteristics

The property is located within a mixed commercial and residential area of Snohomish, with commercial properties located south of First Street and moderate-density residential properties to the north of First Street. The subject property occupies one tax parcel (Snohomish County Parcel 00444100200100) and covers approximately 0.67 acres.

The site is currently developed with two connected warehouse buildings that total approximately 12,528 square feet. The site is operated as metal fabrication shop. The building extends along the northern and eastern parcel boundary. A site survey indicates that the building may extend beyond the parcel boundaries to the north and east. Gravel covers the exterior of the site to the west, south and east of the building. A dike is parallel to the Snohomish River and extends along the property's southwestern boundary.

An aerial photograph of the site and vicinity is provided in Figure 2, below.



Figure 1. Aerial photograph of site and vicinity (GoogleEarth, 2018)

3.3 Physical Characteristics of Site

The site is located on topography that generally slopes southwest, toward the Snohomish River. The developed portion of the site is on relatively level topography at approximately 35 feet elevation. The dike that extends along the southwestern boundary is approximately 4-6 feet higher in elevation and is covered by grasses and trees.

3.3.1 Site Geology and Soils

The following description of the surficial deposits in the vicinity of the subject property was interpreted from the *Geologic map of the Snohomish quadrangle, Washington* (Minard, 1985). The subject property is mapped as being underlain by younger alluvium (Qyal - Holocene age). This unit is mapped along streams and rivers. The sediments consist largely of stream laid clay, silt and fine sand.

Our test pits indicate that approximately 3 feet of fill is located near the surface of the site that is likely mixed with overbank deposits from the Snohomish River. Native soil beneath the fill consists of moist brown to grey silty sand or sandy silt from at least 3 to 6 feet bgs. Our interviews with City of Snohomish personnel indicate that very dense glacial till is present beneath the silt.

3.3.2 Site Hydrology

No surface water features are located onsite; however, the Snohomish River forms the southern boundary of the parcel. The river flows in a westerly direction along the subject property. The river stage greatly varies and likely influences shallow groundwater depth and flow direction. During low flow, shallow groundwater likely flows toward and parallel with the river, while at high stages, groundwater flow may be reversed in close vicinity to the river. No groundwater was encountered in our test pits conducted in April and May 2019, which extended to six feet bgs.

4.0 SITE HISTORY

Our historical review of the property included review of Sanborn Fire Insurance Maps, historical aerial photographs, assessor records and City of Snohomish building files. Copies of the Sanborn maps and historical aerial photographs are provided in Appendix III.

An early building used by Snohomish Ironworks was present on the eastern portion of the site by 1898. The site was developed with a saw and shingle mill on its western end by 1905. The mill was present through 1908, but was removed from the west end of the site by at least 1941. The mill was known as Maughlin Mill Co's saw and shingle mill and as Evergreen State Lumber Mill. The Ironworks building was replaced with a new structure in 1930 and an addition was constructed onto the west side of the building by 1969 (current building footprint). The site was in continuous use as Snohomish Ironworks from the late 1890s through the early 2010s. Gagnon Welding began use at the site in approximately 2016.

The Ironworks operations included a machine shop, foundry, and two coke ovens over the years. The City of Snohomish files included a survey of the property, communications from 1991 regarding bottle diggers that access the riverbank from the river, and pre-application communications in 2016 for feasibility for a new metal working business at the site.

Our communications with Mr. Tim Cross, City of Snohomish engineer, indicated that no debris was encountered during excavations approximately five years ago to the north and east of the building for sewer line and equipment upgrades. Mr. Cross stated that no environmental sampling was completed during the sewer work. Additionally, Tim Jackson from the City of Snohomish stated that the dike on the property is not managed or maintained by the city or a dike district and is owner maintained.

Mr. Ryan Gagnon, property owner, stated that when he purchased the site in 2016, approximately one inch of sediment covered the floor of the building due to previous flood deposits. His research indicated that the building had a fire approximately 60 years ago, after which the glass windows in the eastern portion of the building were replaced with plastic covers. He stated that significant piles of metal and debris was removed from the site and brush was cleared after his purchase, but he was unaware of any previous sampling work.

No previous environmental sampling reports were identified in association with the site.

5.0 SUBSURFACE INVESTIGATION

Prior to completion of the environmental explorations, a public and private locate were conducted to determine locations of underground utility lines and verify that no underground tanks were present. No utility lines or tanks were identified within the areas proposed for test pits. Exploration activities consisted of excavation of test pits using an excavator.

5.1 Exploration Locations and Identification

Six test pits were excavated and soil samples were collected on April 19, 2019. Six additional test pits were excavated prior to a May 16, 2019 sampling event.

The test pits were labeled test pit TP1 through TP12 for reference.

Photographs of the excavation and sampling activities are provided in Appendix I. The locations of the test pits locations are indicated on Figure 3, below.

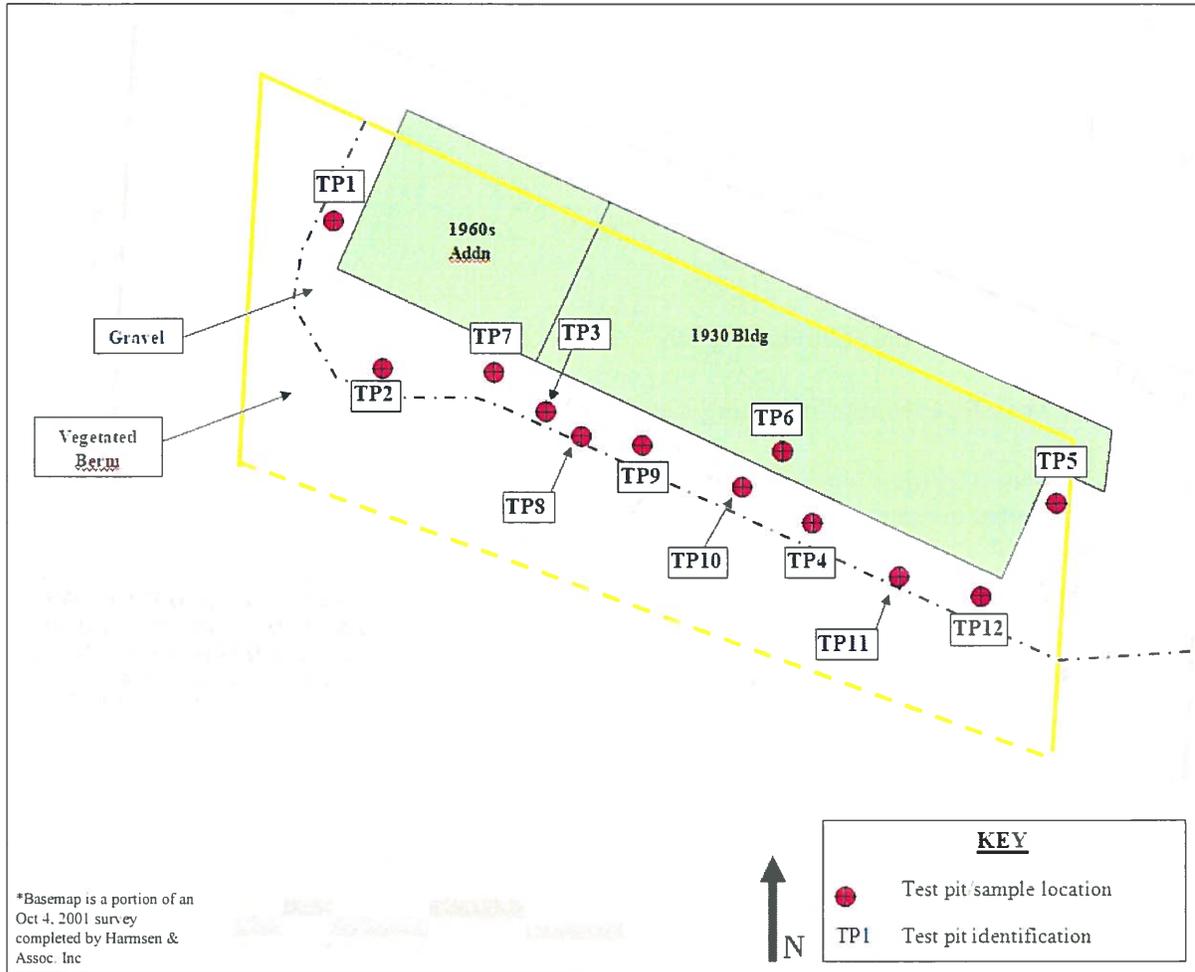


Figure 2. Test Pit Locations

5.2 Potential Contaminants of Concern

The potential contaminants of concern were identified based upon the site's historical use as a foundry, machine shop and use of coke burners. No specific contaminants were identified in connection with the early 1900s use of the site as a shingle mill; however, the soil in this area was visually inspected and tested for metals.

The potential contaminants of concern on the site were identified as:

- Arsenic
- Cadmium
- Chromium
- Lead
- Mercury
- Cyanide
- cPAH
- PCBs
- Petroleum (field testing oil)

5.3 Site Specific Cleanup/Screening Levels and Laboratory Methodology

The method used by the laboratory to evaluate each contaminant and the cleanup screening levels for each potential contaminant are presented in Table 1 for soil and groundwater values.

The screening levels, based upon the MTCA Method A and Method B cleanup standards (Chapter 173-340 WAC), were used to evaluate the sample results. These levels are set to protect human health for direct contact with soil and to protect drinking water quality. Sites that meet the Method A or Method B cleanup standard have unrestricted land use. Soil cleanup standards are measured in parts per million (mg/kg). Please note that if cleanup activity is pursued, additional factors may be needed to determine final cleanup values, including potential impacts to wildlife.

Table 1. Laboratory Analysis Method and Cleanup Screening Standards

Analytes	Laboratory Analysis Method	Soil Screening Level (mg/kg)
Arsenic	EPA - 6020	20
Cadmium		2
Chromium		2000
Lead		250
Mercury	EPA - 7471	2
Cyanide	SM4500 - CN E	48 _B
cPAHs	EPA - 8270 SIM	0.1 TEF _A
PCBs	EPA - 8082	1

A = TEF is calculated by multiplying the measured concentration of cPAH by its toxic equivalency factor. The combined calculated TEF concentrations are compared to the cleanup standard for benzo(a)pyrene.; B = no Method A standard was available, so a Method B standard for unrestricted use was used.

5.4 Soil Samples

5.4.1 Soil Sampling Methods

Soil samples were collected with a stainless steel spoon. The soil was field screened for odor, hydrocarbon sheen and soil discoloration at each sample location. Sampling equipment was disposable and/or was cleaned with Alconox and triple rinsed between each use.

Samples were collected for analyses where contaminants were determined to be most likely, such as where discoloration or soil changes were noted or in zones where debris was present. Soil samples were labeled with the test pit number followed by the depth of the sample. For example, sample TP2-1 was collected from test pit 1 at 1 foot bgs.

Soil samples were placed into labeled, laboratory supplied four-ounce glass jars with a Teflon lined lids. One or two sample jars were collected from each sample depth. Samples were placed into an ice-chilled cooler immediately after sampling.

A total of twenty-four soil samples were collected during the two sampling events, all of which were analyzed by ALS Laboratory Group in Everett, Washington. The samples were delivered to ALS on the day of the sample collection.

5.4.2 Soil Sample Descriptions

Descriptions of the test pits and soil samples collected from each test pit location are provided below. No groundwater was encountered in any of the test pits. No petroleum odors or sheens were identified in any of the test pits.

Test pits TP1 through TP6 were excavated on April 19, 2019. The test pits were conducted

around the site to gain an understanding of the subsurface conditions.

Test pit TP1 was excavated along the west side of the warehouse building, in approximately the location of the former shingle mill or just down gradient of the mill. The soil within the test pit consisted of red brown silty sand with gravel and some roots in the upper 2 feet, underlain by dark red brown silty sand with a significant amount of bricks and wood debris to 4.5 feet (fill), underlain by grey sandy silt with organics (native) to 6 feet bgs. One sample was collected at 2.5 feet bgs (TP1-2.5) within the fill material and one sample was collected at 5 feet bgs (TP1-5), just below the fill.

Test pit TP2 was excavated near the southwest corner of the building. The soil within the test pit consisted of brown silty gravel with sand and roots and some rusty coloration to depths of 3.5 feet, underlain by a layer of bricks at 3.5-4 feet bgs, underlain by gray silty sand (brick subgrade) to 4.5 feet bgs, underlain by brown silty sand with gravel to 5.5 feet bgs (native). The bricks were indicative of a former walkway or patio, as they were organized in the subsurface. Soil samples were collected from 1 and 4 feet bgs (TP2-1 and TP2-4, respectively).

Test pit TP3 was excavated south of the central portion of the building, just east of the boundary between the 1930 structure and the 1960s addition. The test pit was placed in approximately the location of the former coke burner, as indicated on the historical Sanborn maps. The test pit was excavated to 5.5 feet bgs. Gravel fill was present in the upper 0.5 foot, underlain by one foot of light gray silty sand with some sand on the east side of the test pit and black sand on the west side of the test pit. Samples were collected from 1 foot bgs from both sides of the test pit (TP3-1E and TP3-1W). Silty sand with gravel and a significant amount of debris including metal, pipes, plates, and spools were present between 1.5 and 4 feet bgs underlain by light grey-brown silty sand (native). An additional sample was collected from 2.5 feet bgs within the area that contained metal debris (TP3-2.5).

Test pit 4 was excavated south of the eastern portion of the building. The sample consisted of grey silty gravel fill with some silt lenses in the upper 1 foot, underlain by red brown silty sand with gravel that contained metal debris and wood to 4 feet bgs (fill), underlain by red brown to grey silty sand (native). Samples were collected from 1 and 3 feet bgs (TP4-1 and TP4-3).

Test pit 5 was completed along the east side of the building, beneath a canopy. Grey gravel fill with strong iron oxide staining was present in the upper 0.5 foot, underlain by grey sandy silt with gravel to 1 foot, underlain by sandy gravel with silt that contained a large tree trunk and minor pieces of metal with minor iron oxide staining to 4 feet bgs, underlain by grey-brown silty sand (native) to 5.5 feet bgs. Samples were collected from 0.5 and 3.5 feet bgs within the zones that contained iron oxide staining (TP5-0.5 and TP5-3.5, respectively).

Test pit 6 was completed through the floor of the central portion of the 1930-era structure. The sample was collected via hand auger through a portion of the floor where no concrete was present. The soil consisted of brown-grey silt. One sample was collected from one foot bgs (TP6-1).

Six additional test pits were excavated on May 11, 2019 and soil samples were collected on May 16, 2019. These additional pits were excavated to see if the boundaries of the impacted soils could be further defined. Test pits TP-7 through TP-12 were completed to depths of approximately four feet.

Test pit 7 was excavated between TP2 and TP3, to the south of the building and approximately 8 feet west of where the 1960s addition was constructed. The soil within the test pit consisted of shallow gravel fill, underlain by a two-inch layer of rusty colored silt, underlain by 10 inches of brown sand with silt, underlain by 2 inches of rusty colored soil, underlain by brown sandy gravel to 2.5 feet bgs. An approximately four-inch layer of black sand with a nail and a piece of glass was located at approximately three feet bgs, underlain by brown sandy gravel to 4 feet. Samples were collected from 1.5 and 3 feet bgs (TP7-1.5 and TP7-3), where discoloration was noted.

Test pit 8 was completed along the north side of the berm, approximately 10 feet east of TP3. The soil consisted of grey gravel fill on the surface underlain by black silt fill soil with broken concrete, a few metal bands, and minor brick to 2.75 feet bgs, underlain by moist brown silt to 4 feet bgs. Samples were collected within the fill material at 1.5 feet bgs and within the native soil at 4 feet bgs (samples TP8-1.5 and TP8-4).

Test pit 9 was excavated approximately 20 feet east of TP8. The soil profile consisted of fill material to approximately 3 feet bgs. The fill consisted of black silt with brick, minor metal, and roots, underlain by moist tan/brown silt with minor clay (no debris). A sample was collected from within the fill at 1.5 feet bgs (sample TP9-1.5) and just below the fill zone at 3 feet bgs (TP9-3).

Test pit 10 was completed further to the east of TP9. The test pit soils consisted of tan-brown silt to a depth of 3 feet (extent of test pit depth). Minor brick and one wire were observed within the upper one foot, but otherwise minimal debris was present within the test pit. Samples were collected from 1 and 3 feet bgs (samples TP10-1 and TP10-3).

Test pit 11 was completed along the north edge of the berm, approximately 35 feet west of the corner of the building. The test pit consisted of grey-tan-brown rusty silt in the upper 2 feet. Significant debris was noted at approximately 1.5 feet bgs including wood, wires, metal bars, and brick. The soil became red brown silt by 3 feet bgs. Samples were collected from 1.5 and 3.5 feet bgs (samples TP11-1.5 and TP11-3.5).

Test pit 12 was completed just south of the southeast corner of the building. The test pit soils consisted of fill material in the upper 2 feet that was tan-grey-brown silt with some rusty discoloration. Debris in the upper 2 feet consisted of broken concrete, minor metal, plastic, and a hose. The soil became tan-red brown silt with no debris from 2 to 4 feet bgs. Samples were collected from 1.5 and 4 feet bgs (samples TP12-1.5 and TP12-4).

5.4.3 Soil Sample Results

Samples were delivered to ALS Laboratory Group in Everett, Washington for analysis. A

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complete copy of the analytical laboratory reports and chain-of-custodies are provided in Appendix II.

All samples collected were analyzed by the lab. The samples collected from April 19, 2019 were all analyzed for MTCA metals (mercury, arsenic, cadmium, chromium, lead) and two samples collected from the suspected coke burner area were analyzed for cPAHs, PCBs, and cyanide. The results of the first round of sampling found that arsenic, cadmium and lead were the primary contaminants of concern and therefore all the samples collected during the May 16, 2019 sampling event were analyzed for arsenic, cadmium and lead. A summary of the soil sample results are presented in Tables 2 and 3. A map with the soil sample results for arsenic, cadmium and lead, the primary contaminants of concern, is provided in Figure 4.

Table 2. Soil Sample Results

Test Pit	Sample ID _a	Concentration of Contaminants in mg/kg							
		Mercury	Arsenic	Cadmium	Chromium	Lead	PCB _b	Cyanide	cPAH _c
TP1	TP1-2.5	0.07	7.6	0.2	46	57	--	--	--
	TP1-5	0.057	9.5	0.13	50	9.6	--	--	--
TP2	TP2-1	0.046	5.1	0.12	46	19	--	--	--
	TP2-4	0.049	6.5	0.25	36	31	--	--	--
TP3	TP3-1E	U<0.02	480	3.6	61	460	U<0.1	U<0.2	U<0.02
	TP3-1W	U<0.02	1,900	15	84	1,200	U<0.1	U<0.2	0.052
	TP3-2.5	0.3	49	1.8	52	350	--	--	--
TP4	TP4-1	0.18	19	2.1	65	600	--	--	--
	TP4-3	0.06	9.5	5.7	61	91	--	--	--
TP5	TP5-0.5	0.06	67	0.41	49	130	--	--	--
	TP5-3.5	0.046	5.0	0.18	48	34	--	--	--
TP6	TP6-1	0.055	5.4	0.19	62	45	--	--	--
TP7	TP7-1.5	--	3.2	0.16	--	37	--	--	--
	TP7-3	--	8.7	0.55	--	210	--	--	--
TP8	TP8-1.5	--	22	0.46	--	100	--	--	--
	TP8-4	--	12	0.16	--	34	--	--	--
TP9	TP9-1.5	--	12	2.2	--	350	--	--	--
	TP9-3	--	9.5	0.32	--	130	--	--	--
TP10	TP10-1	--	10	0.54	--	410	--	--	--
	TP10-3	--	4.9	0.39	--	52	--	--	--
TP11	TP11-1.5	--	17	2.2	--	170	--	--	--
	TP11-3.5	--	6.0	0.36	--	31	--	--	--
TP12	TP12-1.5	--	9.2	1.0	--	240	--	--	--
	TP12-4	--	5.4	0.18	--	18	--	--	--
MTCA Screening Standards (mg/kg)		2	20	2	2,000	250	1	48	0.1

* U= contaminant not detected at level indicated; a = sample ID consists of the test pit number followed by the depth of the sample (i.e. TP1-2.5 was collected from test pit TP1 at 2.5 feet bgs); b = concentration is a combined total of analytes or the non-detect amount, if none detected; c = concentration of cPAH is a total concentration of cPAHs detected that have been calculated for comparison to benzo(a) pyrene (see calculations in Table 3) ; -- = sample not analyzed for contaminant

Table 3. Soil Sample Results for cPAHs

	Analyte	TEF*	cPAH Concentrations (mg/kg)				Method A Soil Cleanup Standard (mg/kg)
			TP3-1E		TP3-1W		
			Measured (from lab report)	Calculated (measured x TEF)	Measured (from lab report)	Calculated (measured x TEF)	
cPAHS	Benzo(a)anthracene	0.1	U<0.02	--	0.029	0.0029	--
	Indeno(1,2,3-cd) pyrene	0.1	U<0.02	--	0.028	0.0028	--
	Dibenz(a,h)anthracene	0.1	U<0.02	--	U<0.02	--	--
	Benzo(k)fluoranthene	0.1	U<0.02	--	0.021	0.0021	--
	Chrysene	0.01	U<0.02	--	0.040	0.0004	--
	Benzo(b)fluoranthene	0.1	U<0.02	--	0.055	0.0055	--
	Benzo(a)pyrene	1	U<0.02	--	0.038	0.038	0.1
Total Carcinogenic PAHs				U		0.052	0.1

*TEF is calculated by multiplying the measured concentration of cPAH by its toxic equivalency factor. The combined calculated TEF concentrations are compared to the cleanup standard for benzo(a)pyrene.

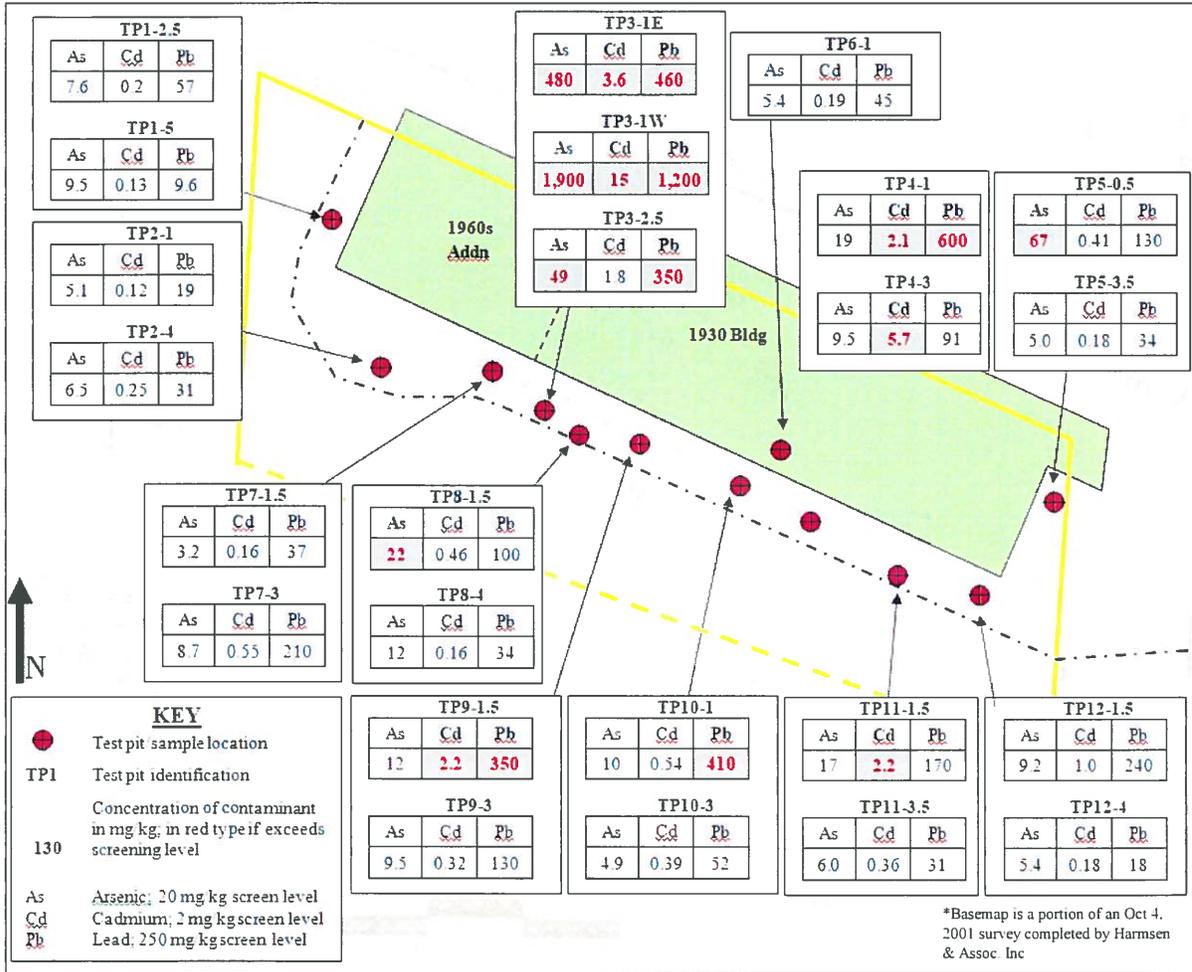


Figure 3. Map of soil sample results for As, Cd, Pb

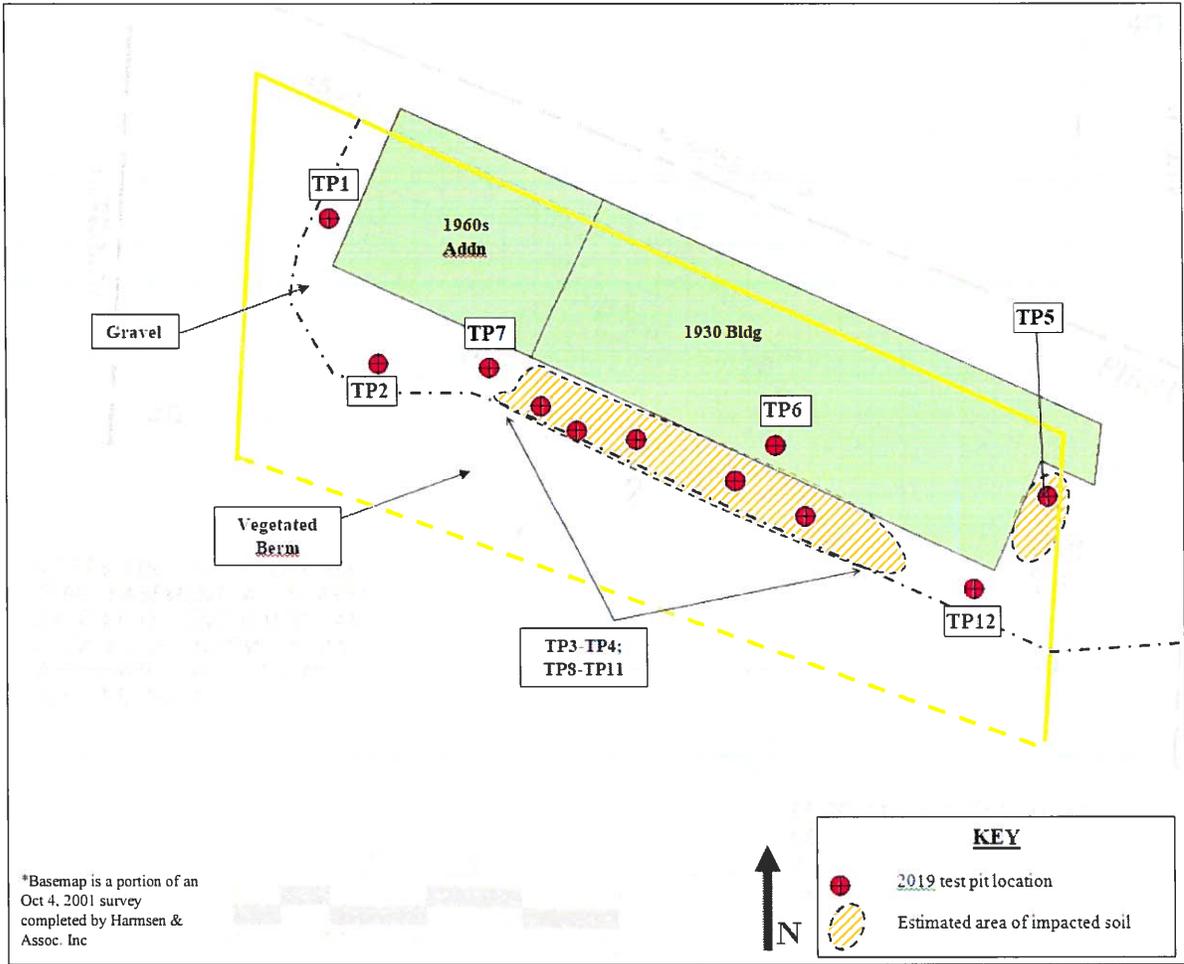


Figure 4. Estimated area of impacted soil

5.5 Soil Characterization for Disposal

To determine if the soil on the site is considered hazardous or non-hazardous for disposal purposes, two of the previously collected samples were further analyzed for RCRA metals using the toxic characteristic leaching protocols (TCLP). The TCLP analysis provides an analysis of how much the metals in the soil will migrate under landfill-like conditions. The results of the TCLP sampling determine whether the samples can be disposed of as hazardous or non-hazardous soil.

Two representative samples were analyzed for TCLP from the April 2019 sampling event and are included in the lab report for the April 19, 2019 sampling event: TP3-2.5 and TP4-1.

The results of the samples utilized to characterize the soil for disposal is provided in Table 4, below.

Table 4. Results for Soil Disposal Characterization

Analytes	Sample Identification* (Sample Name, Results in mg/L)		Maximum TCLP (mg/L)
	TP3-2.5	TP4-1	
Arsenic	U<0.031	U<0.031	5
Barium	0.60	0.70	100
Cadmium	U<0.031	U<0.031	1
Chromium	U<0.031	U<0.031	5
Lead	0.039	0.25	5
Mercury	U<0.0002	U<0.0002	0.2
Selenium	U<0.031	U<0.031	1
Silver	U<0.031	U<0.031	5

Comp 1 sample was a composite from June 8 samples SS-10, SS-11 and SS-13; Comp 2 sample was a composite from June 8 samples SS-22, SS-23, SS-24, SS-25; U = analyte was not detected below the reporting limit, which is in the parentheses.

Based upon the TCLP analysis, the soil is considered non-hazardous for disposal purposes.

5.6 Laboratory Quality Assurance

ALS Laboratory of Everett, Washington was responsible for completion of the analytical assessment of the samples. The laboratory is accredited with the Department of Ecology (accreditation number C601). The laboratory reporting limits were all below the cleanup standards, which indicates that non-detect results are below the cleanup screening standards.

The following quality assurance procedures were completed by the laboratory: surrogate recovery, method blank, and laboratory blank and blank spike duplicates. The recovery values for

June 14, 2019
1411 First Street, Snohomish, WA
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all the quality assurance procedures were within the appropriate recovery ranges.

The laboratory quality control is sufficient and does not affect our ability to interpret the soil sample results for this report.

5.7 Sample Results Discussion

No cPAHs, cyanide, PCBs, chromium, or mercury were detected in the samples above the MTCA screening levels. Metals were detected; however, none of the contaminants exceeded the screening levels in test pits TP1, TP2, TP6, TP7, or TP12.

Following the initial round of test pits, the primary contaminants of concern were identified as arsenic, cadmium and lead. These metals were encountered in the upper fill soils of the site and were associated with locations where metal debris and/or rusty discolored soil was present in the soil. The source of the impacts is suspected to be due to onsite disposal of debris and/or waste sand from the historical foundry activities.

The impacted soil ranges from 0.5 foot bgs in test pit TP5 to an estimated 3-3.5 feet bgs in test pits TP3 and TP4. The deepest sample from 2.5 feet bgs in TP2 and from 3 feet bgs in TP3 continued to exceed the screening levels, so the vertical depth of impacts were not verified in these test pits.

The gravel area underlain by metal impacted soil is estimated to be approximately 2,400 square feet with an average depth of contaminated soils of 2 feet. The soil is assumed to be impacted from the south side of the building wall to the dike; however, please note that this volume calculation is limited, as no samples were taken into the vegetated berm/dike area of the site. Based upon this volume, the total amount of impacted soil is estimated to be 180 cubic yards (275 tons).

If future cleanup action includes excavation and disposal of the material at a landfill, the soil is considered non-hazardous.

6.0 CONCLUSIONS

A phase II soil sampling investigation was completed for 1411 First Street in Snohomish, Washington in April and May 2019. The investigation was conducted to evaluate the site for potential contamination associated with the site's use as an ironworks and foundry site from the late 1890s through the early 2010s.

Soil samples indicate that metal impacted soil is present to the south and east of the current warehouse building. Elevated concentrations of arsenic, cadmium and lead were identified in the soils to depths up to three feet. The elevated metals concentrations were closely associated with zones of fill materials where debris, including metals, were present, as well as rusty soil discoloration.

Based upon this initial testing, the shallow soil is considered to be contaminated with arsenic, cadmium and lead and therefore additional evaluation and/or cleanup is warranted on the site. If future cleanup action includes excavation and disposal of the material at a landfill, the soil is considered non-hazardous, based upon TCLP results.

The property is not currently listed as a Confirmed and Suspected Contaminated Site with Department of Ecology and Ecology. Regarding environmental liability, the MTCA cleanup regulation (WAC 173-340-300) requires that any owner or operator that has knowledge that a hazardous substance has been released to the environment at their facility and where the release may be a threat to human health or the environment, report the release to Ecology. Reporting of this property to Department of Ecology would place the property on the Confirmed and Suspected Contaminated Sites List.



Stratum Group

PO Box 2546

Bellingham, Washington 98227

360.714.9409

July 1, 2019

Ryan Gagnon
1411 First Street
Snohomish, Washington 98290

Proposal: Gagnon Welding: Metal Impacted Soil Cleanup
1411 First Street
Snohomish County Parcel 00444100200100
Snohomish, Washington 98290

Dear Mr. Gagnon:

Stratum Group is pleased to present this proposal for oversight of the shallow metal contaminated soil cleanup activity throughout the gravel-covered areas to the east and south of the building at 1411 First Street. This proposal includes costs for oversight of shallow excavation, collection of confirmation samples, documentation of cleanup efforts, and completion of a final cleanup report. The goal of the cleanup action is to remove all accessible soil that exceeds cleanup standards to meet the Model Toxic Control Act cleanup regulations, such that no further action is required.

ENVIRONMENTAL HISTORY

The site is industrially zoned and has been developed since the late 1890s. Our historical review indicates that the site operated as the Snohomish Ironworks from the late 1890s through the mid 2010s. The ironworks business included a foundry for smelting iron for iron and steel products, such as manhole covers and train parts. Additionally, a shingle mill was located on the western portion of the site in the early 1900s.

Soil sampling completed in April and May 2019 identified elevated concentrations of arsenic, cadmium and lead in the soil. The details are presented in a report titled *Phase II Soil Sampling Investigation, 1411 First Street* (Stratum Group, June 14, 2019). No PCBs, cyanide or cPAHs were present above the screening levels. The impacts are suspected to be present due to dumping of debris and waste sand from the former foundry. The depth of impacts ranged from approximately 0.5 to 3 feet and was largely present in soil zones where metal debris was visibly present. The metal-impacted soil was evaluated for toxicity and was found to be non-hazardous and therefore can be disposed of as non-hazardous solid waste. The volume of soil present on the site was estimated to be 180 cubic yards.

The site exceeds the Model Toxic Control Act Method A regulations for metals in soil and therefore is considered a contaminated site. The site has not been reported to Department of Ecology, to the best of our knowledge, and therefore is not currently listed as a contaminated site in the Ecology databases.

SCOPE OF WORK

Stratum Group will work with excavation contractor to oversee excavation activities. Soil samples will be collected from the base of the excavated areas, as well as undisturbed sidewalls to verify that the cleanup is successful. If confirmation samples are clean, no further excavation work will be required. If samples return with elevated concentrations, excavation will continue until the soil remaining on the site meets the state cleanup standards for unrestricted land use or the soil is no longer accessible for removal.

Our scope of services include:

- Submit soil characteristics to disposal company and facilitate approval for soil disposal
- Coordinate with excavation company for work schedule and temporary soil stockpiling activities
- Observe and document excavation activities
- Collect soil samples from excavated area and non-disturbed areas to verify cleanup
 - All samples will be analyzed for cadmium, lead and arsenic
 - At least 20% of samples will be analyzed for MTCA metals
- Delivery of samples to laboratory
- Evaluate lab results
- Provide verbal reports and recommendations to the client regarding soil disposal
- Provide a written report of our findings including sample maps, photographs, laboratory reports, and analysis of results.

Excavation activities are assumed to take one to two weeks, with three active excavation days. A total of 25 samples are estimated. Samples will be collected approximately every 30 feet of sidewall and excavation bottom. To provide timely sample results, all samples will be analyzed on a one-day turnaround, upon availability of laboratory.

COST ESTIMATE

Costs for Stratum Group's work on this project includes field work, coordination and report writing, and transportation costs for field visits and delivery of soil samples to laboratory.

The estimated line items for this project are provided below.

Cost Estimates

		Activity	Total Estimated Cost
CLEAN UP AND REPORTING	Stratum Group	Onsite Field Work (3 days)	\$4,800
		Sampling supplies	
		Sample courier/mileage/travel	
		Report preparation	
	Subcontractor	ALS Laboratory: Laboratory Analysis (rushed) <ul style="list-style-type: none"> ○ Cd, Pb, As (20 samples) ○ MTCA Metals (5 samples) 	\$2,730
Estimated Total			\$7,530

Cost Assumptions

Stratum Group charges on a time and expense basis. These costs assume three full days will be spent onsite to observe excavation and collect soil samples.

Laboratory costs are based upon direct costs invoiced by the laboratory (no mark up) and represent costs if the laboratory invoices are paid directly by you. If the invoices are initially paid by Stratum Group, an additional 15% fee will be added to the laboratory costs. The laboratory costs assume a one-day turnaround for results.

These costs do not cover permitting, excavation, backfill, stockpiling, utility locate, and/or disposal of soil.

If additional days of excavation or additional samples are required (or deemed necessary by the consultant) that exceed this proposal, a change-order will be requested. Additionally, if unforeseen environmental conditions are encountered (i.e. deeper metal impacted soil, tanks, additional contaminants), a change-order will be requested to cover any additional fees.

Further Investigation

Cleanup activities will be completed as an independent remedial action with the goal to have the site meet the Washington State MTCA cleanup regulations. If all impacted soil is not accessible, the report will describe the limitations of the cleanup process with further recommendations, if needed. Please note that professional opinions by consultants and Ecology personnel can vary. If Ecology approval is needed, the cleanup report would be submitted for an Initial Investigation. If approved, the site would be not become a listed site and would be granted a “no further action” determination. If additional data is required by Department of Ecology to satisfy their

understanding of the site, then the site would need to enter the Voluntary Cleanup Program (VCP). Ecology conducts review of sites through a fee-based program and charges approximately \$110/hour for site work. We estimate that Stratum Group fees for VCP application and submittal of all data into their EIM database would cost approximately \$1,000. We estimate that Ecology's review would be approximately \$1,000. Additional costs would be associated with the additional sampling/report requirements needed by Ecology personnel (costs dependent upon what Ecology requests/requires).

Time Line

We are willing to begin work on the project, as soon as is needed. Samples will be collected throughout the excavation process. A final report can be produced approximately three weeks after cleanup confirmation and soil disposal are complete.

If this proposal is acceptable, please sign and return a copy of this letter to our office.

We appreciate the opportunity to submit this proposal and look forward to providing our services to you. Should you have any questions regarding this proposal, please do not hesitate to contact us at (360) 714-9409.

Sincerely,

Stratum Group



Kim Ninnemann, B.S.
Geologist

APPROVAL:
(sign and print)

TITLE:

DATE:

BILLING ADDRESS (if different than address above):

